

# GENESIS64™

World's Most Advanced HMI/SCADA Software



A suite of 64-bit HMI/SCADA software solutions

Gold  
Microsoft Partner



Make the Invisible Visible™

# The Next Generation in HMI/SCADA

Advanced 64-bit multi-core, multi-processor computing on 64-bit Microsoft operating systems has arrived. ICONICS GENESIS64™ suite is a native .NET application that delivers unparalleled HMI/SCADA performance with OPC and BACnet open-standard connectivity.

The GENESIS64 suite includes solutions that allow for connectivity from plant floor and building facilities to corporate business systems. Designed from the ground up to leverage 64-bit, OPC UA, .NET managed code and SharePoint® technology, GENESIS64 allows operators, executives and IT professionals to integrate real-time manufacturing, energy and business information into a secure and unified Web-enabled visualization dashboard.



Workbench Multi-application Layout

## Powerful Centralized Configuration

**Workbench** is the multi-functional, centralized desktop or web-based environment for all GENESIS64 product configurations and is the core of the GENESIS64 suite, making development faster and cutting design costs of any application. Offered in Windows Presentation Foundation (WPF), users can configure and manage their entire GENESIS64 application from anywhere on any device.

**ProjectWorX™** provides complete project management capabilities for any application within the secure Workbench environment. Comprehensive project management features include:

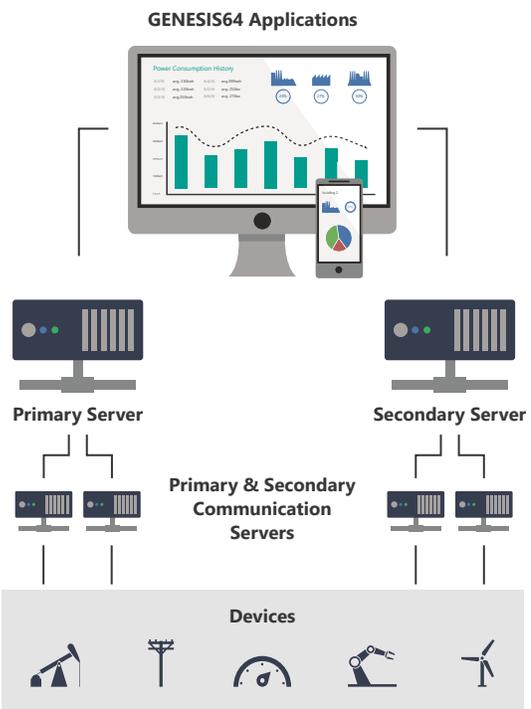
- Versioning and change management
- Global search, organize, find and replace
- Pack-and-Go deployment
- Project statistics and audit trails

## Mission-critical Redundancy

GENESIS64 ensures the safety of any critical data by offering high availability redundancy for the best communication reliability. Redundant collectors and loggers serve as a backup in case of a system failure. With automatic fault detection and store-and-forward technology, GENESIS64 users can be assured that mission-critical real-time data, historical data and alarm information are always available. ICONICS redundancy solutions are simple to configure, install and deploy. Tested on Hyper-V and certified for VMware, GENESIS64 software redundancy covers all major aspects of data redundancy such as data access, historical data, alarms and security.

## Universal Connectivity with OPC UA and BACnet

GENESIS64 supports industry standard communications such as OPC, OPC UA, Modbus, BACnet, web services and databases. The first 64-bit Advanced Workstation (B-AWS), GENESIS64 is certified by the BACnet Testing Laboratories, ensuring maximum integration with BACnet protocols such as BACnet objects, trends and alarms. GENESIS64 is certified for OPC UA compliance by the OPC Foundation. Simple device discovery on the network makes integration seamless and efficient.



Redundancy Architecture



## ISA-95 Compliant Asset Management

**AssetWorX™** is an architectural layer that greatly reduces engineering time while improving operator consistency and providing intuitive navigation. It enables the system to be engineered and operated based on an intelligent asset model configured to represent your organization. Users can easily embed Fault Detection and Diagnostics (FDD) or energy metrics within these distributed assets, which can be defined according to the ISA-95 standard.

## Advanced Visualization on Any Device, Any Time, Anywhere

**GraphWorX™64** delivers stunning 2D and 3D HMI and SCADA visualization that empowers customers to view their entire systems operations from their desktop or mobile device. Users can build scalable, XAML vector-based graphics or use preconfigured symbols with dynamic properties, referenced colors and flexible animations. Smart Tiles™ are seamlessly integrated to display key performance metrics within operational dashboards. GENESIS64 also supports the ability to create 3D graphics or import 3D models from Autodesk or other third-party design software.



## IoT and Cloud Integration

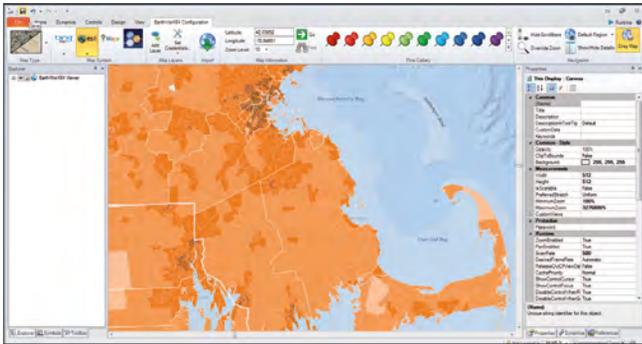
The ICONICS IoT Gateway Suite communicates with Microsoft Azure or third-party applications by publishing on-premises data to the cloud via secure transport protocols. ICONICS visualization, analytics and mobile solutions then subscribe to and consume the data, which gives operators access from any device. Customers can create hybrid solutions that maintain data integrity and security while delivering KPI dashboards on the cloud. This advanced technology creates the most efficient and cost-effective means of connecting the simplest devices to a global network in order to maximize system productivity.

GENESIS64 also offers expansive advanced visualization for any system, empowering users to view equipment and assets through dazzling graphics. **WebHMI™** brings the capabilities of your GENESIS64 application to an HTML5 or WPF compliant web browser. **MobileHMI™** is a powerful app that provides a consistent user experience on any mobile device. Generate executive self-service dashboards utilizing preconfigured symbols from any mobile device with **KPIWorX™**. GENESIS64's responsive UI flawlessly transitions between clients to provide consistent cross-platform viewing capabilities.



## Quickly View Assets with Geo-SCADA

**EarthWorX™**, GENESIS64's geographical information SCADA module, provides real-time visualization of widely dispersed assets. ICONICS' patented Smart Pin™ technology allows for an intuitive drill-down capability to instantly view alarm conditions and status for any location around the world. GENESIS64 is integrated with Bing, Google, Esri maps and any maps conforming to the open Web Map Service (WMS) format.



Esri Population Map with Smart Pin Technology

## Real-time and Historical Charts and Analysis

ICONICS offers scalable solutions for historical data logging and analysis, encompassing everything from a simple data logger to a distributed, cloud-ready enterprise historian. The powerful **TrendWorX™ 64 Viewer** is an interactive OPC HDA-compliant control that provides open connectivity to OPC DA, OPC UA, SQL Server, Oracle, MySQL, or data logged using **Hyper Historian™**, ICONICS' high-speed, robust plant historian.



TrendWorX64 Real-time and Historical Trending

## HMI Integrated Database Access and Control

**GridWorX™** enables spreadsheet-style visualization of data with fully integrated read and write support to any database. Use GridWorX to access Web services and to sort, filter and group results from databases such as Microsoft SQL Server, Oracle, MySQL and more.

## Distributed Alarm Management

**AlarmWorX™ 64** is a distributed, enterprise-wide alarm and events management system capable of handling the most demanding applications. The alarm system offers extensive tools to deliver and view real-time and historical alarm information. AlarmWorX64 includes an OPC Server, Logger and Alarm Viewer that is compliant with OPC and OPC UA A&E industry standards.

## Fault Detection and Diagnostics

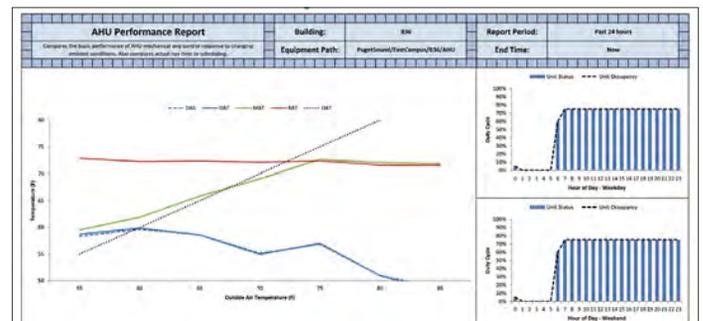
**FDDWorX™** offers real-time FDD technology that triggers recommendations for improvement and facilitates commissioning processes. It proactively identifies energy offenders and predicts equipment failures to continuously improve system efficiency. The moment failures occur, automated fault diagnostics analyze sensor readings and provide guidance to the service technician.



FDDWorX Details View

## On-demand Microsoft Excel Reporting

**ReportWorX™ Express** is an Excel add-in that enables users to pull in data from a variety of sources. Integrating with GENESIS64 security, coupled with support for ICONICS data sources, ReportWorX Express satisfies many reporting needs. **ReportWorX™ 365** provides users with a reporting tool that does not require any previous installation of ICONICS products. Supported data sources include OPC, OPC UA, TrendWorX Logger Databases, Hyper Historian, AlarmWorX Logger Databases, Energy Star and Quality AnalytiX®.



ReportWorX Excel Add-in

## Improve Enterprise Productivity!

The largest cost of any automation project is in engineering the application. For an average project, this can be well over 60 percent of the total expenditure. Taking advantage of 64-bit computing greatly reduces this effort and shortens the design time, resulting in enormous cost savings and drastic improvements to your bottom line. As an award-winning Microsoft Gold Partner, ICONICS is able to consistently deliver software solutions based on the latest 64-bit Microsoft operating systems, including Windows 10, Windows 8 and Windows Server 2012. Key features of Windows come to life within GENESIS64 and provide users with the greatest application performance, reliability and flexibility.



ICONICS  
provides a 360°  
view of your  
entire enterprise.

### Key Features

- **Universal connectivity** – OPC UA, BACnet, SNMP and databases
- Intuitive 2D and 3D WPF and HTML5 **visualization**
- Object-oriented distributed **alarm management**
- Support for **asset and tag-based** organization
- Cross-browser, cross-platform access on **any device**
- **Web-based** development and configuration
- **Customizable** frame or canvas-based visualization
- **Hardware-accelerated 3D** user experience
- Native user interaction with **voice and multi-touch**
- International **language support** and extensible API

### Ideal for Any Industry

For over three decades, ICONICS industrial automation software solutions have met and exceeded real customer needs in multiple industries, including:

- Automotive
- Building Automation
- Chemical and Biotechnology
- Discrete Manufacturing
- Energy Management
- Food and Beverage
- Government and Military
- Materials and Mining
- Oil, Gas and Petrochemical
- Pharmaceutical
- Power, Utilities and Energy
- Process Manufacturing
- Shipping and Logistics
- Sustainability and Renewables
- Transportation
- Water and Wastewater





Founded in 1986, ICONICS is an award-winning independent software provider offering real-time visualization, HMI/SCADA, energy management, fault detection, manufacturing intelligence, MES, and a suite of analytics solutions for operational excellence. ICONICS solutions are installed in 70 percent of the Global 500 companies around the world, helping customers to be more profitable, agile and efficient, to improve quality, and to be more sustainable.

ICONICS is leading the way in cloud-based solutions with its HMI/SCADA, analytics, mobile and data historian to help its customers embrace the Internet of Things (IoT). ICONICS products are used in manufacturing, building automation, oil and gas, renewable energy, utilities, water and wastewater, pharmaceuticals, automotive, and many other industries. ICONICS' advanced visualization, productivity, and sustainability solutions are built on its flagship products: GENESIS64™ HMI/SCADA, Hyper Historian™ plant historian, AnalytiX® solution suite, and MobileHMI™ mobile apps. Delivering information anytime, anywhere, ICONICS' solutions scale from the smallest standalone embedded projects to the largest enterprise applications.

ICONICS promotes an international culture of innovation, creativity, and excellence in product design, development, technical support, training, sales, and consulting services for end users, systems integrators, OEMs, and channel partners. ICONICS has over 350,000 applications installed in multiple industries worldwide.



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**For more, visit [www.iconics.com/GENESIS64](http://www.iconics.com/GENESIS64)**

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